

Appl. No. 10/085,175  
RCE Dated February 18, 2006.  
RCE Reply to Office Action August 08, 2007, Due Nov 08, 2007

**Amendments to the Claims**

I have amended the Claims 1, 2, 3 & 13 to be consistent with the terms called out in the initial patent application.

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### **Claims**

1. (Amended): A device to accommodate fluid thermal expansion/contraction in a closed heat transfer loop that excludes air also, which is comprised of: a one-way out pressurizing pressure relief valve and a one-way in vacuum fluid recovery valve plumbed in parallel from the highest single point in the solar system to below the fluid level of an unpressurized overflow/recovery reservoir.
2. (Amended): A solar collector over-temperature protection device which consists of a gas bubble "steam" condensing liquid-to-air radiator between the highest point on the solar collector and the device to accommodate fluid thermal expansion/contraction in a closed heat transfer loop that excludes air also, which consists of: a liquid-to-air radiator in series with a one-way out pressurizing pressure relief valve and a one-way in vacuum fluid recovery valve plumbed in parallel from the highest single point in the system above the radiator to below the fluid level of an unpressurized overflow/recovery reservoir.
3. (Amended): A solar collector over-temperature protection device that consists of a gas bubble "steam" pressure-actuated piston to open air dampers that allow outside air to flow over and cool the solar collector's absorber plate, where the piston pressure input is connected between the solar collector and the device to accommodate fluid thermal expansion/contraction in a fluid filled, closed loop, system, which consists of: a pressure activated piston connected to the closed loop, a one-way out pressurizing pressure relief valve and a one-way in vacuum fluid recovery valve plumbed in parallel from the single highest point in the solar system to below the fluid level of an unpressurized overflow/recovery reservoir.
13. (Amended): A solar collector over-temperature protection device which consists of a gas bubble "steam" condensing liquid-to-air radiator, a pressure-actuated piston operated air dampers and a fluid thermal expansion/contraction assembly, which consists of: a piston-mechanical actuator for collector air dampers according to Claim 3, a liquid-to-air

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radiator according to Claim 2 and a fluid thermal expansion/contraction assembly according to Claim 1.

### Claims

1. (Amended): A device to accommodate fluid thermal expansion/contraction in a closed heat transfer loop that ~~eliminates non-condensable gases~~ excludes air also, which is comprised of: a one-way out pressurizing pressure relief valve and a one-way in vacuum fluid recovery valve plumbed in parallel from the highest single point in the solar system to below the fluid level of an unpressurized overflow/recovery reservoir.

2. (Amended): A solar collector over-temperature protection device which consists of a gas bubble "steam" condensing liquid-to-air radiator between the highest point on the solar collector and the device to accommodate fluid thermal expansion/contraction in a closed heat transfer loop that ~~eliminates non-condensable gases~~ excludes air also, which is ~~comprised~~ consists of: a liquid-to-air radiator in series with a one-way out pressurizing pressure relief valve and a one-way in vacuum fluid recovery valve plumbed in parallel from the highest single point in the system above the radiator to below the fluid level of an unpressurized overflow/recovery reservoir.

3. (Amended): A solar collector over-temperature protection device that consists of a gas bubble "steam" pressure-actuated piston to open air dampers that allow outside air to flow over and cool the solar collector's absorber plate, where the piston pressure input is connected between the solar collector and the device to accommodate fluid thermal expansion/contraction in a fluid filled, closed loop, system, which ~~is comprised~~ consists of: a pressure activated piston connected to the closed loop, a one-way out pressurizing pressure relief valve and a one-way in vacuum fluid recovery valve plumbed in parallel from the single highest point in the solar system to below the fluid level of an unpressurized overflow/recovery reservoir.

13. (Amended): A solar collector over-temperature protection device which ~~includes~~ consists of a gas bubble "steam" condensing liquid-to-air radiator, a pressure-actuated piston operated air dampers and a fluid thermal expansion/contraction assembly, which is

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~~comprised~~consists of: a piston-mechanical actuator for collector air dampers according to Claim 3, a liquid-to-air radiator according to Claim 2 and a fluid thermal expansion/contraction assembly according to Claim 1.